

## REMARKS

Claims 1-25 are pending in the application. Applicants gratefully acknowledge Examiner's indication that claims 9, 10 and 13-25 are allowed. Applicants respectfully request reconsideration of the rejection of claims 1-8, 11 and 12.

### Claim Rejections - 35 U.S.C. § 102

Claims 6-8 and 11-12 stand rejected as being anticipated by U.S. Patent No. 5,182,773 to Bahl, et al. Claims 3 and 5 stand rejected as being anticipated by U.S. Patent No. 6,161,089 to Hardwick. Applicants respectfully submit that at the very minimum, the Office Action fails to present a *prima facie* case of anticipation with respect to independent claims 3, 6 and 11.

With regard to claim 6, the Examiner cites Bahl (Col. 9, lines 50-53 and Col. 10, lines 5-8) to support the anticipation rejection of claim 6, contending that Bahl teaches extracting feature vectors wherein the feature vectors are averaged. It is respectfully submitted that Examiner's reliance in this regard is misplaced. To begin, the Examiner fails to address the specific claim language of claim 6 which recites *temporally or spatially averaging the feature stream to reduce the variance of the feature stream*. In the cited section, Bahl teaches a K-means clustering technique in which feature vectors are clustered based on distance measures into groups having a centroid that is computed by the average of the clustered feature vectors, which is not the same as that recited in claim 6.

Furthermore, with respect to claim 11, with utter lack of support or specific citation to relevant sections of Bahl, it is contended on page 2 of the Office Action, that Bahl teaches MFCC computed over multiple overlapping frames. However, Applicants respectfully request that the Examiner provide at least some reasonable explanation to support such contention. Indeed, it is believed that the particular terms "MFCC", "Mel", or "overlapping frames" are not

even contained in the disclosure of Bahl. Without more, the Office Action fails to provide the required level of proof or burden of establishing a *prima facie* case of anticipation of claim 1.

Thus, for at least the above reasons, there is no showing in the Office Action to support the anticipation rejection of independent claims 6 or 11, much less against claims 7, 8 and 12 at least by virtue of the dependence of such claims from respective base claims 6 or 11.

Similarly, there is no legally sufficient explanation in the Office Action to support a *prima facie* case of anticipation of claim 3 and 5 based on Hardwick. Indeed, it is simplistically contended on Page 2 of the Office Action that Figs. 5 and 7 #6 of Hardwick “teaches a method for spectral parameters where the spectral envelope estimate is obtained from the mean value of two overlapping sub-frames.”

However, it must be noted at the outset that the anticipation rejection fails to address the specific language of Claim 3 which recites *generating the spectral envelope estimates from overlapping frames in the digitized utterance based on a harmonic mean of at least two low-to-high resolution spectrum estimates*. In this regard, reliance on Hardwick is confusing and appears to squarely miss the point. To begin, Hardwick discloses in FIG. 5 computations based on combining parameters of separate sub frames (Col. 8, lines 14-27) not overlapping frames as claimed. Moreover, in the embodiment of FIG. 7, the vector quantizer (#6) does not perform “harmonic mean” computing. In contrast, as depicted in FIG. 8 and explained on Col. 11, lines 50-55, the vector quantizer computes a “mean value” as the arithmetic average of mean signals ( $mean1 + mean2 / 2$ ), which is clearly not a “harmonic” mean computation. Moreover, given that Figs. 7 and 8 are detailed embodiments of the Quantizer module (525) of FIG. 5, there appears to be no basis for the reliance on Figs. 5 and 7 of Hardwick as anticipating claim 3.

Thus, for at least the above reasons, there is no showing in the Office Action to support the anticipation rejection of independent claim 3, much less claim 5 at least by virtue of the dependence of such claim from base claim 3.

Accordingly, reconsideration and withdrawal of the anticipation rejections is respectfully requested.

#### **Claim Rejections - 35 U.S.C. § 103**

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bahl as applied to claims 6-8 and 11-12 above, and further in view of Bhasker.

Moreover, claim 4 stands rejected as being unpatentable over Hardwick as applied to claims 3 and 5, and further in view of Bhasker.

Applicants respectfully submit that the Office Action fails to present a *prima facie* case of obviousness against claims 1, 2 or 4. For example, with regard to claim 1, to the extent that Examiner relies, in part, on the teachings of Bahl as applied to claims 6-8 and 11-12, the obviousness rejection of claim 1 is flawed for at least the same reasons given above, in that Bahl does not teach that which Examiner contends. Moreover, the conclusory statement to support the motivation for combining Bahl and Bhasker (as set forth on page 3 of the Office Action) falls way short of that which is required to establish a *prima facie* case of obviousness. It is not enough to simply contend that the MVDR teachings of Bhasker could just be implemented in the Bahl system. The Office Action provides no rhyme or reason for such combination except for “providing high quality of spectral envelope modeling.”

Similarly, with regard to claim 4, to the extent that Examiner relies, in part, on the teachings of Hardwick as applied to claims 3 and 5, the obviousness rejection of claim 4 is


flawed for at least the same reasons given above, in that Hardwick does not disclose that which is claimed in claim 3 (from which claim 4 depends).

Accordingly, for at least the above reasons, reconsideration and withdrawal of the obviousness rejections is respectfully requested.

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